

IN THE CLAIMS:

Amend the following claims:

Claim 1 (currently amended): A perpendicular magnetic recording system comprising a perpendicular magnetic recording medium having a soft magnetic underlayer and a magnetic recording head for performing magnetic recording on said perpendicular magnetic recording medium, said magnetic recording head having a plurality of poles including a main pole for finally recording a magnetization reversal on said perpendicular magnetic recording medium, the perpendicular magnetic recording system satisfying

$$T_{b1} < (B_{S1} \times T_m \times T_{ww}) / 2(B_{S2} \times (T_m + T_{ww})),$$

where  $T_{b1}$  is the thickness of said soft magnetic underlayer in said perpendicular magnetic recording medium,  $B_{S2}$  is the saturation flux density of the same,  $T_m$  is the thickness of said main pole along a track direction in the vicinity of its floating surface,  $T_{ww}$  is the track width of the same and is less than  $0.5\mu\text{m}$ ., and  $B_{S1}$  is the saturation flux density of the same.

Claim 2 (original): The perpendicular magnetic recording system according to claim 1, wherein the thickness  $T_{b1}$  of said soft magnetic underlayer satisfies

$$T_{b1} > 0.25 (B_{S1} \times T_m \times T_{ww}) / 2 (B_{S2} \times (T_m + T_{ww})).$$

Claims 3 and 4: cancelled.

Claim ~~5~~<sup>3</sup> (original): The perpendicular magnetic recording system according to claim 1, wherein the distance between said main pole and another pole of said magnetic recording head is greater than or equal to  $0.5\mu\text{m}$ .

Claim ~~6~~<sup>4</sup> (original): The perpendicular magnetic recording system according to claim 2, wherein the distance between said main pole and another pole of said magnetic recording head is greater than or equal to  $0.5\mu\text{m}$ .

Claim 7 cancelled.

Claim ~~8~~<sup>5</sup> (original): The perpendicular magnetic recording system according to claim ~~5~~<sup>3</sup>, wherein the thickness  $T_{b1}$  of said soft magnetic underlayer in said perpendicular magnetic recording medium is smaller than or equal to  $0.2\mu\text{m}$ .

Claim ~~9~~<sup>6</sup> (original): The perpendicular magnetic recording system according to claim ~~6~~<sup>4</sup>, wherein the thickness  $T_{b1}$  of said soft magnetic underlayer in said perpendicular magnetic recording medium is smaller than or equal to  $0.2 \mu\text{m}$ .

Claim 10 cancelled.

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